Title: DATA READ/WRITE CONTROLLING METHOD, DISK ARRAY APPARATUS, AND RECORDING MEDIUM FOR RECORDING DATA READ/WRITE CONTROLLING PROGRAM
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DOCKET NO.: 047912-0136

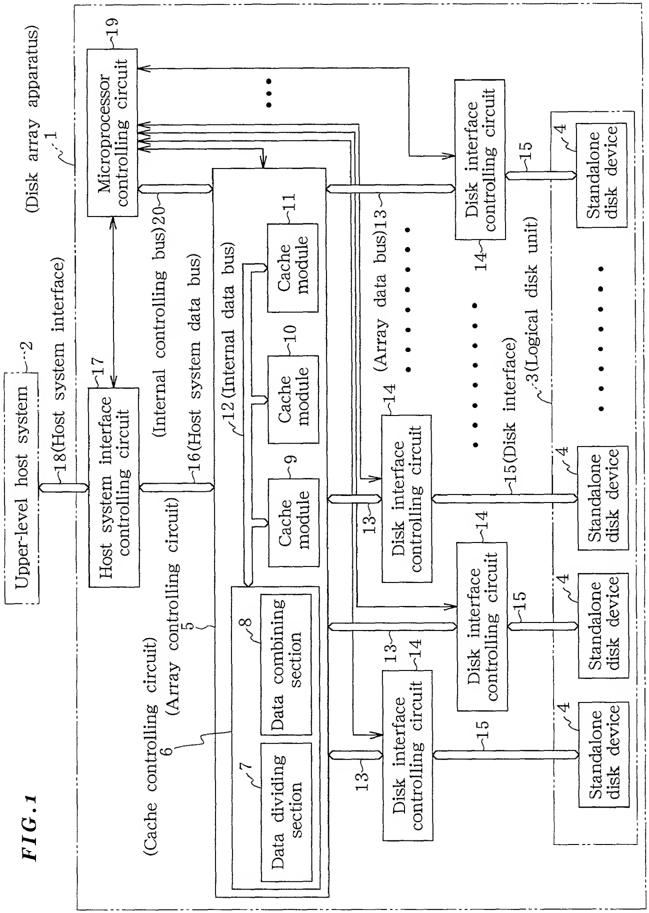

(Disk array apparatus) 1
Upper-level host system 2
18(Host system interface)
Host system interface controlling circuit 17
Microprocessor controlling circuit 19
(Internal controlling bus)20
16(Host system data bus)
12(Internal data bus)
Cache module 9
Cache module 10
Cache module 11
(Cache controlling circuit) 6
(Array controlling circuit) 5
Data dividing section 7
Data combining section 8
(Array data bus)13
Disk interface controlling circuit 14
15(Disk interface)
3(Logical disk unit)
Standalone disk device 4

FIG.1

FIG.2

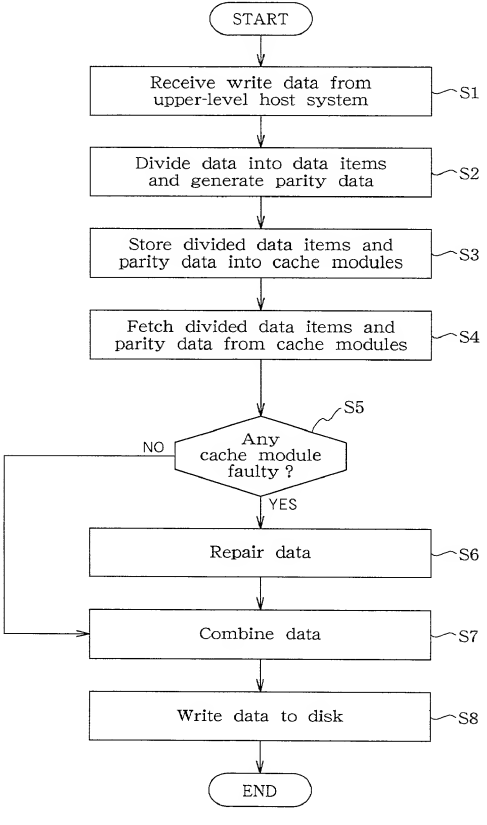
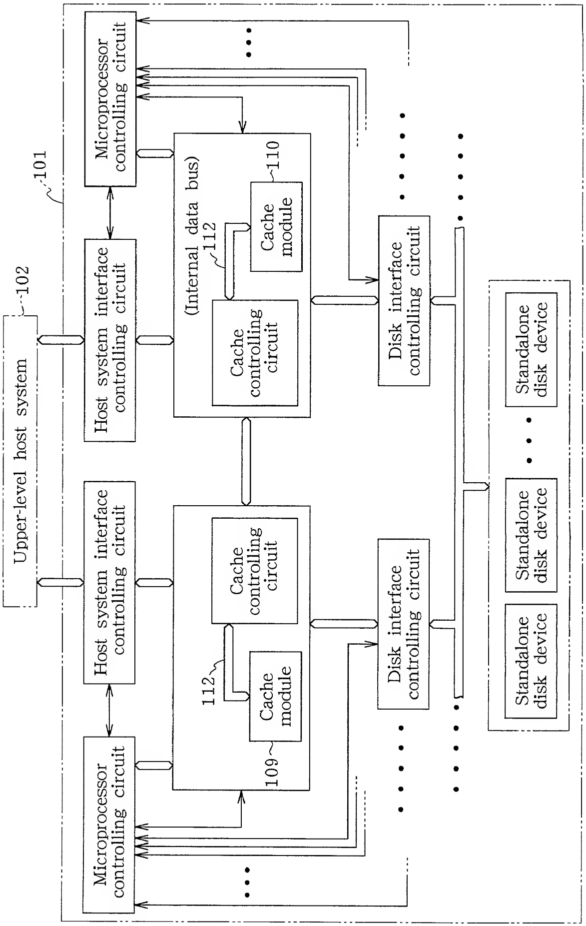

START
Receive write data from upper-level host system
S1
Divide data into data items and generate parity data
S2
Store divided data items and parity data into cache modules
S3
Fetch divided data items and parity data from cache modules
S4
S5
Any cache module faulty ?
NO
YES
Repair data
S6
Combine data
S7
Write data to disk
S8
END

FIG.3


101
102
Upper-level host system
Microprocessor controlling circuit
Host system interface controlling circuit
(Internal data bus)
112
110
Cache module
Cache controlling circuit
Disk interface controlling circuit
Standalone disk device
Standalone disk device
Standalone disk device
Host system interface controlling circuit
Cache controlling circuit
Disk interface controlling circuit
112
Cache module
109
Microprocessor controlling circuit